

CLAIMS:

1. Method of scanning lines in a display within a frame, where driving luminance information provided to the display for each pixel within the frame is divided into subfields, the method including the steps of:
 - 5 selecting subfields to be used when scanning lines in a set of scanning cycles equivalent to the number of subfields existing for driving the pixels,
 - scanning the lines consecutively for the set of scanning cycles, and
 - varying the selection of subfield from line to line in each scanning cycle such that no two consecutive line scans use the same subfield and no line is scanned using the same subfield twice during the set of scanning cycles, such
 - 10 that image flicker caused by the subfields is reduced.
2. Method according to claim 1, wherein a scan of a line includes applying an RMS voltage corresponding to a value of the subfield to a pixel.
- 15 3. Method according to claim 1, wherein the step of varying includes selecting the subfields in a consecutive order from line to line.
4. Method according to claim 1 wherein the step of varying includes selecting the subfields in a random order from line to line until all subfields have
- 20 been selected and thereafter repeating the random selection until all lines have been scanned.
5. Method according to claim 1, wherein the subfields have varying lengths.
- 25 6. Method according to claim 1, wherein the subfields are subframes provided according to a frame length control scheme.

7. Method according to claim 1, wherein the subfields are subframes provided according to a frame rate control scheme.

8. Method according to claim 1, wherein the subfields are provided 5 according to a pulse width modulation scheme.

9. Method according to claim 1, wherein the subfields are provided according to a combination of schemes listed in claims 5, 6 and 7.

10 10. Device for scanning a number of lines in a display within a frame using luminance values within a frame and comprising:

at least one conversion unit for converting received luminance values into driving luminance information including subfields, and supplying the subfields to a line driving unit,

15 a line driving unit arranged to scan each line consecutively with the luminance information of each pixel on the display in a number of scanning cycles equivalent to the number of subfields existing for driving the pixels, and a control unit arranged to provide variation of the selection of subfield from line to line for each scanning cycle such that no two consecutive line scans use the same subfield and no line is scanned using the same subfield twice 20 during the set of scanning cycles, such that image flicker caused by the different sizes of the subfields is reduced.

25 11. Device according to claim 10, wherein the control unit is arranged to select the subfields in a consecutive order from line to line.

12. Device according to claim 10, wherein the control unit is arranged to select the subfields in a random order from line to line until all subfields have been selected and thereafter to repeat the random selection until all lines have been 30 scanned.

13. Device according to claim 10, wherein the subfields have differing

lengths.

14. Device according to claim 10, wherein the subfields are provided as subframes according to a frame length control scheme.

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15. Device according to claim 10, wherein the subfields are provided as subframes according to a frame rate control scheme.

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16. Device according to claim 10, wherein the subfields are provided according to a pulse width modulation scheme.

17. Device according to claim 10, wherein the subfields are provided according to a combination of schemes listed in claims 13, 14 and 15.

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Portable electronic device comprising:

a display,

at least one conversion unit for converting received luminance values into driving luminance information including subfields and supplying the subfields to a line driving unit,

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a line driving unit arranged to scan each line consecutively with the luminance information of each pixel on the display in a number of scanning cycles equivalent to the number of subfields existing for driving the pixels, and a control unit arranged to provide variation of the selection of subfield from line to line for each scanning cycle such that no two consecutive line scans use the same subfield and no line is scanned using the same subfield twice during the set of scanning cycles, such that image flicker caused by the different sizes of the subfields is reduced.